This listing of the claims replaces all prior versions in the application.

Listing of Claims:

1. (Currently Amended) A method of cardiac diagnostics of a patient, comprising:

administering a stress test to the patient;

acquiring a plurality of different views of MRI cine-loops of the heart of the patient at a plurality of heart rates the different views comprising some views associated with a first anatomical view at different heart rates induced by different doses of a stress-inducing substance and some views associated with different anatomical views at a substantially constant heart rate, wherein the MRI cine-loops are generated using multiple MRI images that form the frames of the cine loops;

temporally synchronizing the plurality of MRI cine loops;

adjusting the plurality of temporally synchronized MRI cine loops based on a heart rate associated with respective ones of the MRI cines so as to compensate for differences in heart rate so that each MRI cine loop has substantially the same duration;

displaying a plurality of the adjusted MRI cine loops at a clinician workstation in substantially real-time while the patient is in an MRI scanner used for the acquiring step;

allowing a clinician to electronically select at least one of the following: (a) at least one dose amount; (b) at least one view; or (c) at least one dose amount and at least one view to define the MRI cine loops for the displaying step; and

evaluating the compensated MRI cine loops so as to assess a state of coronary physiology of the patient, wherein the cine loops are displayed during the stress test to allow a physician to assess cardiac physiology of a patent so as to adjust parameters of the test and/or avoid injury to the patient thereby providing safer cardiac stress testing.

2. (Original) The method of Claim 1, further comprising adjusting the administration of the stress test based on the evaluated compensated MRI cine loops.

3. (Original) The method of Claim 1, wherein the evaluation of the compensated MRI cine loops comprises determining a presence or absence of coronary artery disease based on

the compensated MRI cine loops.

4. (Original) The method of Claim 1, further comprising simultaneously displaying a plurality of the compensated MRI cine loops.

5. (Original) The method of Claim 4, wherein at least one of the plurality of compensated MRI cine loops comprises a resting heart rate cine loop.

6. (Original) The method of Claim 4, wherein evaluation of the compensated MRI cine loops comprises determining a presence or absence of coronary artery disease based on the simultaneously displayed plurality of compensated MRI cine loops

7. (Original) The method of Claim 4, wherein simultaneously displaying a plurality of the compensated MRI cine loops comprises simultaneously displaying a plurality of cine loops for differing locations associated with the heart of the patient for a single dosage of a stress inducing agent.

8. (Original) The method of Claim 4, wherein simultaneously displaying a plurality of the compensated MRI cine loops comprises simultaneously displaying a plurality of cine loops for a single location associated with the heart of the patient for levels of stress of the patient.

9. (Previously Presented) The method of Claim 1, wherein adjusting the plurality of MRI cine loops comprises adding frames to at least one of the plurality of MRI cine loops.

10. (Previously Presented) The method of Claim 1, wherein the adjusting comprises adding and/or removing frames from respective ones of the MRI cine loops such that all of the MRI cine loops have a same number of frames.

11. (Previously Presented) The method of Claim 10, wherein the adding and/or removing frames comprises adding frames by repeating frames of an MRI cine loop.

12. (Previously Presented) The method of Claim 10, wherein the frames that are added and/or removed are evenly distributed throughout an MRI cine loop.

13. (Original) The method of Claim 1, wherein the MRI cine loops are compensated such that corresponding frames in each of the plurality of MRI cine loops correspond to a common relative time within a cardiac cycle of the patient.

14. (Original) The method of Claim 1, wherein the MRI cine loops are compensated so that differing heart rates of the patient visually appear to have a same duration.

15. (Original) The method of Claim 1, wherein adjusting the plurality of MRI cine loops comprises adjusting a duration of display of frames of a least one of the plurality of MRI cine loops such that each of the MRI cine loops has a common total duration.

16. (Original) The method of Claim 15, wherein each of the MRI cine loops has a duration of at least one full cardiac cycle.

17. (Original) The method of Claim 15, wherein frames for which the duration is adjusted are evenly distributed throughout the MRI cine loop.

18. (Original) The method of Claim 1, wherein evaluation the compensated MRI cine loops comprise comparing at least two of the plurality of cine loops to each other.

19. (Original) The method of Claim 18, wherein one of the at least two of the plurality of cine loops is a baseline MRI cine loop.

20. (Previously Presented) The method of Claim 19, further comprising registering frames of the plurality of MRI cine loops to the baseline MRI cine loop.

21. (Currently Amended) A method of displaying MRI cine loops comprising:

adjusting a characteristic of one frame of a plurality of frames of an MRI cine loop, wherein the MRI cine-loops are generated using multiple MRI images that form the frames of the cine loops, wherein the characteristic is at least one of contrast, brightness, and gamma; and

propagating the adjustment of the one frame to other frames of the MRI cine loop.

22. (Previously Presented) The method of Claim 21, further comprising:

displaying a plurality of MRI cine loops during the adjusting step; and

automatically propagating the adjustment of the one frame of the MRI cine loop to frames of the other MRI cine loops.

23. (Original) The method of Claim 21, wherein adjusting a characteristic comprises cropping a frame of the plurality of frames to provide a portion of the frame.

24. (Currently Amended) The method of Claim 21, wherein adjusting a characteristic comprises adjusting a contrast, opacity or brightness of a display level of the frame.

25. (Currently Amended) A method according to Claim 1, further comprising obtaining MRI images for the MRI cine loops using a fast gradient echo segmented k-space sequence having sufficient temporal resolution for identification of end of systole without MR fluoroscopy, the temporal resolution being between about 13-65 ms, with lower times corresponding to faster heart beats and higher times corresponding to slower heartbeats, and wherein the MRI cine loops are obtained using breathhold durations between about 10-23 seconds, the longer breathhold durations associated with faster heart beat rates.

26. (Previously Presented) The method of Claim 21, further comprising adding frames to at least one of the plurality of MRI cine loops with the added frames substantially evenly distributed through the at least one cine loop so that the cine loops represent different heart beats that are synchronized.

27. (Previously Presented) The method of Claim 21, further comprising electronically storing the adjusted characteristic and subsequently displaying the MRI cine loops with the adjusted characteristic at a later time.

28. (Previously Presented) The method of Claim 1, further comprising electronically automatically comparing a baseline MRI cine loop of the patient to MRI cine loops at different heart rates.

29. (Currently Amended) The method of Claim 28, further comprising electronically registering the differing MRI cine loops to the baseline loops such that corresponding pixels of the cine loops or portions of the cine loops are each associated with approximately a same physical location within the patient a common physical location of the heart in the MRI cine loops before the step of comparing.

30. (Currently Amended) The method of Claim 1, wherein the allowing a clinician to electronically select step comprises providing electronic user touch screen inputs displayed apart from the display images of the MRI cine loops that are associated with selectable views and doses of the MRI cine loops that allow a user to select both at least one view and at least one dose amount for the MRI cine loops for the displaying step.

31. (Previously Presented) The method of Claim 25, wherein acquiring step is carried out using the k-space segmentation and breathhold durations for the specified differing heart rates according to:

Heart Rate (beats/min)	Views per Segment	Temporal Resolution (msec)	Breathhold Duration (sec)
<55	10	65	10
55-65	8	52	13-11
65-95	6	39	15-10
95-125	4	26	15-12
125-170	2	13	23-17

32. (Currently Amended) A cardiac diagnostic workstation, comprising:

a workstation with a display in communication with an MRI scanner;

wherein[[,]] the display is configured to display a plurality of different views of temporally synchronized MRI cine-loops of the heart of a patient in the MRI scanner in substantially real-time while the patient is in the MRI scanner, the MRI cine-loops adjusted to have substantially the same duration, the different views comprising some views associated with a first anatomical view of the heart of the patient at different heart rates induced by different doses of a stress-inducing substance and some views associated with different anatomical views of the heart of the patient at a substantially constant heart rate, wherein the MRI cine-loops are generated using multiple MRI images that form the frames of the cine loops, and wherein the display is configured to accept user input to electronically select at least one dose amount and/or at least one anatomical view whereby selected MRI cine loops are displayed responsive thereto to thereby allow a clinician to evaluate cardiac function and physiology during a stress test whereby the cine loops are displayed during the stress test to allow a physician to assess cardiac physiology of a patent so as to adjust parameters of the test and/or avoid injury to the patient thereby providing safer cardiac stress testing.

33. (New) A method according to Claim 1, wherein the step of allowing the clinician to electronically select at least one of the following: (a) at least one dose amount; (b) at least one view; or (c) at least one dose amount and at least one view to define the MRI cine loops for the displaying step allows the clinician to select each of (a), (b) and (c), and wherein the step of allowing the clinician to select is carried out to allow the clinician to rapidly switch between various display mechanisms.

34. (New) A workstation according to Claim 31, wherein the display is configured to accept user input to electronically select a plurality of dose amounts and a plurality of side-by-side anatomical views in response to clinician input whereby selected MRI cine loops are displayed responsive thereto, and wherein the display is configured to rapidly switch between various display mechanisms for evaluating the MRI cine loops of different doses of the stress-inducing substance at a same location of the heart and different locations of the same dose of the stress inducing substance.